

## Key Indicators: Operational Definitions

The following definitions are operational summaries of the more detailed definitions included in the Key Indicators database metadata files. The definitions provided here describe the essential computational steps involved in the derivation of each Key Indicator. Nuances pertaining to issues such as data coding and recoding, pre-processing of data source files, treatment of data peculiarities and missing data, etc are not included in these definitions.

### Question 1: Are more Kentuckians ready for postsecondary education?

#### **1.01 K-12 student achievement (State):**

Average (mean) composite ACT score of spring high school graduates.  
Source: ACT Inc.

#### **1.02 High school students scoring a three or higher on Advanced Placement exams per 1,000 high school juniors and seniors (State):**

This indicator measures the number of Advanced Placement subject tests taken by 11<sup>th</sup> and 12<sup>th</sup> grade students with scores of 3 or higher per 1,000 11<sup>th</sup> and 12<sup>th</sup> grade students enrolled in public and private schools. The measure uses the following calculation: Numerator: Number of 11<sup>th</sup> and 12<sup>th</sup> graders' Advanced Placement subject test scores of 3, 4, or 5. Denominator: Total 11<sup>th</sup> and 12<sup>th</sup> graders enrolled in public and private schools. Source: The College Board

#### **1.03 Incoming Kentucky high school graduates requiring remediation in mathematics and English (State):**

Percentage of entering postsecondary students from in-state high schools with subject scores that place them in need of remediation. The numerators for mathematics and English are the number of students with scores below the remedial cut-offs (ACT score of 19 for mathematics and 18 for English), while the denominator in both cases is the total number of first-time, degree-seeking college students who graduated from in-state high schools in the placement test year. Source: Kentucky Council on Postsecondary Education Comprehensive Database.

#### **1.04 Kentuckians earning GEDs (State):**

Total number of GEDs awarded in Kentucky during the calendar year.  
Source: GED Testing Service.

- 1.05 K-12 teacher preparation (Institutional: comprehensives, research universities):**  
Quality Performance Index for teacher preparation programs, which includes Praxis II pass rates, mean scores on the New Teacher Survey, and pass rates on the Kentucky Teacher Internship Program (KTIP).  
Source: Kentucky's Education Professional Standards Board (EPSB)

**Question 2: Is Kentucky postsecondary education affordable for its citizens?**

**2.01 Kentuckians' ability to pay for college (State):**

Net annual cost of attending college (tuition, room, and board, minus financial aid) as a percentage of median family income for each of three institutional sectors: public four-year institutions, private four-year institutions, and public two-year institutions. To derive these numbers, first the net annual cost is calculated for each sector in Kentucky and the average financial aid granted in each of these sectors is estimated using national data. Secondly, the median income of each of the five family income quintiles in the state is calculated. Thirdly, the proportion of the median of each quintile that would be needed to pay the net annual cost is calculated for each sector. Finally, a single state number is derived for each sector by averaging over the five income quintiles. Source: Measuring Up: The State Report Card on Higher Education.

**2.02 Low income Kentuckians' ability to pay for college (State):**

Tuition and fees for full-time residents at the lowest-priced public institution in the state (KCTCS) as a percentage of the median family income of the lowest income quintile in the state. Source: Measuring Up: The State Report Card on Higher Education.

**2.03 State investment in need-based financial aid (State):**

State investment in need-based financial aid as compared to the federal investment in need-based aid. Numerator: total amount of state need-based aid awarded to Kentucky undergraduates. Denominator: total amount of federal Pell grant aid given to Kentucky students. Source: Measuring Up: The State Report Card on Higher Education.

**2.04 Student loan debt (State):**

Average loan amount of all Stafford and PLUS loans to Kentucky undergraduate students and their parents in a fiscal year. Source: Measuring Up: The State Report Card on Higher Education.

- 2.05 Net cost of attendance as a percent of median family income (Institutional: comprehensives, research universities, KCTCS):**  
To be determined.

**Question 3: Do more Kentuckians have certificates and degrees?**

**3.01 Ninth-graders' chance for college by age 19 (State):**

The product of the graduation rate of ninth-graders at public high schools and the college continuation rate for both public and private high school graduates. The graduation rate of ninth-graders at public high schools is calculated by taking the ratio *of* in-state public high school graduates from the academic year *to* the number of 9<sup>th</sup> graders enrolled in public schools in the state four years previous. The college continuation rate for public and private high schools is calculated by taking the ratio *of* first-time college entrants anywhere in the nation who graduated from in-state high schools during the previous academic year *to* the number of in-state public and private high school graduates during the previous academic year. Sources: Postsecondary Education Opportunity analysis based on IPEDS and NCES data

**3.02 College-going rate of GED graduates (State):**

Percentage of Kentucky's GED graduates who have enrolled in a Kentucky postsecondary educational institution within two years. Numerator: the number of Kentucky GED graduates from in the fiscal year two years prior to the current academic year who enrolled in a public or independent postsecondary educational institution that year or during the current or previous academic years. Denominator: the number of GED awards made in the fiscal year two years prior to the academic year. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.03 Undergraduate enrollment (State):**

The total of all of the in-state public and independent institutions' fall semester undergraduate headcount enrollments, including full-time and part-time, degree seeking and non-degree seeking students. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.04 Graduate enrollment (State):**

The total of all of the in-state public and independent institutions' fall semester headcount of graduate and first-professional enrollments. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.05 Degrees and other credentials awarded (State):**

Total number of certificates, diplomas, and degrees at all levels awarded by in-state public and independent institutions during an academic year (1 July through 30 June). Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.06 Degrees and other credentials awarded to racial-ethnic minorities (State):**

Total number of certificates, diplomas, and degrees at all levels awarded by in-state public and independent institutions to members of racial-ethnic minority groups during an academic year (1 July through 30 June). Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.07 Undergraduate enrollment (Institutional: comprehensives, research universities, KCTCS):**

Total fall semester headcount of undergraduate enrollments, including full-time and part-time, degree seeking and non-degree seeking students. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.08 Graduate enrollment (Institutional: comprehensives, research universities):**

Total fall semester headcount of graduate and first-professional enrollments. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**3.09 Students transferring to Kentucky's four-year institutions from KCTCS (Institutional: comprehensives, research universities):**

Total number of first-time transfers from KCTCS to public and independent four-year institutions in Kentucky during the fall and spring semesters. Source: Kentucky Council on Postsecondary Education Comprehensive Database

- 3.10 Graduation rate (Institutional: comprehensives, research universities):**  
Percentage of first-time, full-time, baccalaureate degree-seeking students who graduate within six years. The graduation rate reported for a given year is calculated at the conclusion of the academic year based on the baccalaureate cohort matriculating in the summer and fall semesters six academic years previously. Source: Kentucky Council on Postsecondary Education Comprehensive Database
- 3.11 Persistence rate (Institutional: KCTCS):**  
Percentage of first-time, full-time and part-time, credential-seeking students who have graduated, transferred, or are still enrolled three years after entry. The persistence rate reported for a given year is calculated at the conclusion of the academic year based on the student cohort matriculating in the summer and fall semesters three academic years previously. Source: Kentucky Council on Postsecondary Education Comprehensive Database
- 3.12 Degrees and other credentials awarded by four-year institutions (Institutional: comprehensives, research universities):**  
Total number of credentials above the associate level (ie: at the undergraduate, graduate and first-professional levels) awarded during an academic year (1 July through 30 June). Source: Kentucky Council on Postsecondary Education Comprehensive Database
- 3.13 Associate degrees awarded (Institutional: KCTCS):**  
Total number of associate degrees awarded during an academic year (1 July through 30 June). Source: Kentucky Council on Postsecondary Education Comprehensive Database
- 3.14 Certificates and diplomas awarded (Institutional: KCTCS):**  
Total number of credentials below the associate level awarded during an academic year (1 July through 30 June). Source: Kentucky Council on Postsecondary Education Comprehensive Database
- 3.15 Degrees and other credentials awarded to racial-ethnic minorities (Institutional: comprehensives, research universities, KCTCS):**  
Total number of credentials above the associate level awarded to members of racial-ethnic minority groups during an academic year (1 July through 30 June) at four-year institutions or total number of credentials at all levels awarded to members of racial-ethnic minority groups during an academic year (1 July through 30 June) at two-year institutions. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**Question 4: Are college graduates prepared for life and work in Kentucky?**

**4.01 Performance of college graduates on statewide learning assessments (State):**

Projected to be funded in 2006-07. Assessment tool to be determined at that time.

**4.02 Performance of college graduates on licensure or graduate school entrance exams (State):**

Comparisons of Kentucky and national pass rates on the following professional licensure exams:

NCLEX Baccalaureate Exam

NCLEX Associate Exam

NCLEX Practical Nursing Exam

Physical Therapist Licensing Examination

Part I of the National Council for Examiners for Engineering Exam

Kentucky Bar Exam

Part 2 of the National Dental Board Exam

North American Pharmacist Licensure Examination

Part 2 of the US Medical Licensure Exam

American Registry of Radiologic Technicians Exam

National Board for Respiratory Care Exam

Sources: State licensing boards, Kentucky Council on Postsecondary Education Comprehensive Database

**4.03 Student engagement in the undergraduate learning experience (Institutional: comprehensives, research universities, KCTCS):**

Institutional scores for first-year students and seniors on the NSSE benchmarks of effective educational practice (level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment) (at Kentucky four-year institutions) or institutional scores for students on similar CCSSE benchmarks of effective educational practice (at Kentucky two-year institutions). For comparison purposes, scores are also calculated for reference groups composed of selected benchmark institutions. Source: National Survey of Student Engagement and Community College Survey of Student Engagement

**4.04 Civic participation of students (Institutional: comprehensives, research universities, KCTCS):**

Percentages of first-year students and seniors (at four-year institutions) or of all students (at two-year institutions) reporting spending one or more hours per week doing volunteer work, reporting participation in a community-based project as part of a regular course during the school year, reporting that their college experiences substantially enhanced their knowledge, skills, and personal development in terms of contributing to voting in local, state, or national elections, and reporting that their college experiences substantially enhanced their knowledge, skills, and personal development in terms of contributing to the welfare of their communities. Source: National Survey of Student Engagement and Community College Survey of Student Engagement

**Question 5: Are Kentucky's people, communities and economy benefiting?**

**5.01 Research and development per capita (State):**

Total extramural research and development expenditures per capita for the institutionally defined fiscal year. Extramural expenditures include postsecondary institutions' research and development expenditures from all federal, state, local, corporate and foundation funding sources, excluding only institutionally-funded research and development. Sources: National Science Foundation Survey of R&D Expenditures at Universities and Colleges, and US Census Bureau American Community Survey

**5.02 College graduates remaining in Kentucky to live and work (State):**

Percentage of graduates of in-state public and independent institutions living or working in Kentucky five years after graduation. Sources: Kentucky Council on Postsecondary Education Comprehensive Database, Kentucky Department of Transportation Driver's License Records, and Kentucky Unemployment Insurance Records

**5.03 Degree and other credential production in focus fields (State):**

Total number of credentials at all levels awarded in science, technology, engineering, and mathematics (STEM) fields by in-state public and independent institutions during an academic year (1 July through 30 June), using federal EPSCoR STEM categories. Source: Kentucky Council on Postsecondary Education Comprehensive Database

**5.04 Workforce training and assessment (State):**

Participation in Kentucky Adult Education (KYAE) and KCTCS workforce training and assessment programs, including KCTCS credit and non-credit workforce enrollments, fire/rescue training and employment assessments, and KYAE Workforce Projects, Workforce Alliance, and workforce assessments. Sources: Kentucky Community and Technical College System Databases and Kentucky Adult Education Databases

**5.05 Extramural research and development funding (institutional: comprehensives, research universities):**

Total extramural research and development expenditures for the institutionally defined fiscal year. Extramural expenditures include institution's research and development expenditures from all federal, state, local, corporate and foundation funding sources, excluding only institutionally-funded research and development. Source: National Science Foundation Survey of R&D Expenditures at Universities and Colleges

**5.06 Business start-ups (institutional: research universities):**

Number of new and continuing business start-ups dependent upon the licensing of the institution's technology that have their primary place of business in Kentucky at the end of the institutionally defined fiscal year. Source: Association of University Technology Managers (AUTM) Survey

**5.07 Formal agreements for educational, applied research, or support services to business, entrepreneurs, government, and community groups (Institutional: comprehensives, research universities, KCTCS) :**

To be determined.

**5.08 Faculty/staff community involvement as extensions of their university roles (Institutional: comprehensives, research universities, KCTCS):**

To be determined.



## **Performance Funding Benchmark Indicators for the 2006-08 Biennium**

### **B.01 Productivity:**

Total number of baccalaureates awarded during an academic year (1 July through 30 June) per 100 undergraduate full-time equivalent enrollments in the fall semester four years previously (at four-year institutions) or total number of credentials awarded during an academic year (1 July through 30 June) for curricula of at least one year per 100 undergraduate full-time equivalent enrollments in the fall semester two years previously (at two-year institutions).

### **B.02 Public funding:**

Total tuition and fee revenue for a fiscal year, adding back in all discounts and allowances applied to those tuitions and fees, plus total state and local appropriations for the fiscal year, minus mandated program funding for the fiscal year, all divided by the fall semester undergraduate full-time equivalent enrollment.

### **B.03 Efficiency:**

Indicator B.01 (Productivity) multiplied by 1,000 and divided by Indicator B.02 (Public funding).

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